

Amendments to the Specification

Replace the paragraph beginning at page 4, line 16 with the following paragraph:

Shown in FIG. 1 is a semiconductor device 10 comprising a semiconductor substrate 11, a metal layer 12, an interlayer dielectric (ILD) 14, a via hole in ILD 14 to conductor 12, a protective layer 18, and a corrosion inhibitor 20 in the vapor phase. Semiconductor substrate 11 may be just semiconductor material, semiconductor on insulator (SOI), or another alternative useful as a substrate in semiconductor manufacturing. Metal layer 12 is preferably copper but may be another metal such as aluminum. Metal layer 12 is shown being immediately over substrate 11 for simplicity but in practice, there would other features, such as transistors, between substrate 11 and metal layer 12. ILD 14 is any dielectric useful for separating conductor layers. ILDs have generally been a form of silicon oxide but are becoming more preferably of a low k material. Protective layer 18 is formed by the application of corrosion inhibitor 20. Corrosion inhibitor 20 is applied in the vapor phase and results in protective layer 18 as a monolayer of corrosion inhibitor 20 bonded to metal layer 12. Inhibitor 20 may also be on ILD 14 but does not bond to ILD 14. Inhibitor 20 is a material that bonds to metal and inhibits the passage of moisture when so bonded. The choice of the exact composition of inhibitor 20 may be optimized for the particular metal being protected. Such inhibitors are commercially available from Cortec Corporation of St. Paul, Minnesota.

Replace the paragraph beginning at page 6, line 11 with the following paragraph:

Shown in FIG. 3 is semiconductor device 10 after application of inhibitor 24 that forms protective layer 26 over layer 22. Inhibitor 24 can be applied in the manner described for inhibitor 20 in FIG. 1 with an impregnated pad or similar to FIG. 1 as being applied to the wafers receiving the deposition while still in the deposition tool. The composition of inhibitor 24 may be preferably a somewhat different composition from that of inhibitor 20, especially if the layer 22 is of a different material from that of conductor 12.